

U. S. DEPARTMENT OF AGRICULTURE
BUREAU OF BIOLOGICAL SURVEY

Form Bi-689

FIELD DIARY

Mr. E.A. Goldman

(Official title.)

Period, June 12 to June 26, 1924

Yellowstone Nat. Park -
NOTICE
Montana (Absoraka Mts.)

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(Thus).

June 12, Gallatin R.S., Md.
Nat. Park. (continued from
previous book)

Elk. Fifteen or 20 elk
were seen today in various
places on the summer
range on Fan Creek. In
one bunch of over a dozen
animals consisting of cows
and bulls 4 calves were
seen. Some of the cows
are in the dark sleek
summer coat and others
still retain much of the
winter coat and have
a patched appearance.
Very few signs of elk were
seen on Specimen Lk.
probably owing to the
steep nearly uniformly
timbered character, but

June 12 con.

Pan Creek is moderately occupied by elk.

Moose. Three were seen today in the willows, on the broad flat forming the bottom along Pan Creek. All were cows — 2 together and another perhaps a $\frac{1}{4}$ mile away. They were watched feeding for some time. One was clearly seen browsing willows and one appeared to be feeding on the coarse grass or aquatic vegetation among the willows. This was at 1 P.M., a few moose droppings about the size and color of large peans were seen on Specum Ch. in the woods.

June 13 (Fri.), Galleton
R.S. Nat. Nat. Park.

Off at 8:30 A.M. and
returned home about 4:30
P.M.

Route was up Bacon
River bed. For several miles
to a point where we
found a trail used by
elk extending up hillside
on north side of canyon.
This we followed until
it spread out in a
beautiful grassy area
known as the Burnt Fork
bottom, Burnt Fork
being a branch of Bacon
River which enters the
main canyon rather
low down. We followed

June 13 con.

the slope on up to the top of a long ridge above timber line which extends across the head of Bacon River Crk. and around the heads of Snowtide and Monument creeks. From the top we had excellent views of the surrounding country, including the full length of the Gallatin Range, upper Gallatin River, the Grayling Fork, the ~~Monument~~ peaks in the distance far to the south and nearer the precipitous heads of Bacon River and Snowtide creeks. The return was across Snowtide

15

June 13 con.

Creek canyon and over a pass into the head of Monument Lk. down which we came and returned to camp.

Forage. Excellent nearly everywhere along the way today, but at the higher elevations had not yet grown much as the snow had only recently melted off. Some elk grazed in summer apparently above timber line. A few elk stay in winter along Monument Lk a part of the time and there we found some utilization of willow.

June 13 con.

Elk. A few signs of cow elk and calves were seen along the lower part of Rodon River where there is a broad beaver flat, and the trail up to Burnt Fork country showed considerable use. Several were seen in the edge of timber so that they could not easily be counted in 2 places near in Burnt Flat section and 3 cows in another place in the same section. Some of these had shed but others showed a paler appearance. On Burnt

June 13 am.

Fork section consisting of extensive open parkland mixed with timber signs were seen of a considerable number, and calf tracks were noted in several places. Many of these signs were well up the slope not far from the lower edge of the small remaining stream banks where the slope was fresh and green, but short owing to the brief period during which it had been uncovered. A third horse and a few old signs were seen on the summit.

June 13 con.

above timber line and it seems probable that a few range up there in late summer although that does not account for the third herd. There is little or no evidence that elk cross the high pass to Sage Creek at the head of Bear Rivd. On the return route across Snowslide Creek we followed a game trail ~~which~~ which is no doubt part of a formerly well travelled route across a pass in the vicinity of the ridge between the heads of

June 13 con

Snowshoe and Monument
creeks. But there is little
use of this trail recently.
A few elk are ranging
now, however, all through
this section. A few elk
also range at present,
and are said to have
ranged all summer
within a mile of Nelson
Storage Jr., place on
Monument Creek. It seems
very clear that the present
~~habits~~ in this section
prevent a former migration
across to Sage Creek.

June 14 (Sat.) Upper
Gallatin River, Gel. Nat.
Park.

Off at 10.30 A.M., horses
had strayed. Made camp
about 6 P.M.

Routed along Faun Pass
trail from Gallatin Sta.
to top of pass, then
~~west~~^{south} branch we dropped
into bottom of Gallatin
valley near where it
breaks precipitously along
sides about 3 miles
below Faun Pass.

Trail ascended great-
ly to top of pass
which is a saddle near
timber line at about
9000 ft. Most of snow

June 14 con.
had melted, but there
were still small
drifts in places.

Fauna. Very good along
most of way, but at the
higher elevations herd not
yet had time to make
much growth and is
being considerably utilized
by the elk which seem
to be pretty generally
distributed. Some browsings
of *Symphoricarpos* etc
was noted.

Elk. About 26 head
of elk were seen in
various places, the
largest bunch consisting
of about 16 head about
1/2 of which were bulls.

June 14. con.

In the evening elk were out in the timber & the flat along the Gallatin within a $\frac{1}{4}$ of a mile above and below camp. One stood watching us for some time from the edge of the timber. All elk seen were in good condition. Some are in summer coat and others still are in ragged pelage. A number of large bulls were seen some with growing horns at least 2 ft. long. Apparently most of those at the higher levels are bulls. No calves were seen but

June 14 con.

a few tracks were noted.
The elk are evidently
following the melting
snow closely, but do not
range much off the trail
in the Pass. Many tracks
were seen going both
ways in well worn
trail across the Pass.
Trails from the Gallatin
converge toward the
Pass and one too well
worn trail runs north
just west of the Pass
to the St. Louis Lk.
drainage.

June 15 (Sun), Near Bighorn Pass,
Yellowstone Park.

Off at 8:30 A.M. - Ascended by
trail up Gallatin River to
Bighorn Pass. The Pass is very
narrow, less than a $\frac{1}{4}$ mile wide.
precipitous bluffs, on the
east side the Pass opens in
a basin perhaps a mile
across, and on the west
side is the rather broad,
gradually sloping Gallatin
River, the slope ~~extending~~
~~meandering~~ near the head
which is the little Gallatin
lake at the foot of 3 Rivers
Peak. Camped on Panther Creek,
several miles east of Bighorn
Pass. Weather clear, warm and
fine.

June 15 con.

Forage. Sun & shorter days at similarly low elevation on the winter range of deer. Whether this is due to drier conditions or to elk utilization I am not quite sure. Along Panther Creek there is considerable utilization of willow, and it may be that some elk winter here. Some of this willow browsing is, however, no doubt by moose which occur here.

Elk. Seen in a number of places today, both cows and bulls, and a few calf backs were seen along Panther Lk. Head Big Sheep Gallatin is fairly well occupied by elk. In Bighorn Pass fresh tracks were seen of a small bunch at least that had gone through fence

June 15 con.

met ~~each~~ east to ~~west~~ Just through the Pass on the east side we met a bunch of about a dozen and just beyond 7 more that were evidently headed for the Pass and if not stopped by us would apparently have gone through from east to west. These were, I am inclined to think Mountain elk. An elk trail was seen with my glasses looking across from near the Pass, along the Gallatin slope of the hills on the western side of the River leading toward a pass about as high as Big Horn across to the Grayling west of Three Rivers Peak. In this pass I could see a trail through the snow.

June 15 con.

Moose. A few signs not
very fresh seen on the
willows and fir timber along
Panther Cr. and willows
considerably browsed in
the vicinity.

June 16^{Mon} Yellowstone Park,
Yel. Nat. Park, Wyo.

Left camp on Panther Creek
and skirted the eastern foot-
hills of the Gallatin Mts.

turning northward up the Tarn
Ck. and Gardner Ck. valleys.
He rode for several miles
up the Tarn Ck. canyon and
then turned back and followed
the Tarn Pass trail east
to Yellowstone Park. From
our camp near where the
Panther Ck. emerges from its
mountains it is open, rolling
country, largely grassland
extending east for miles.
The Tarn Creek and the branch
of Gardner Ck. form the
point where the latter
enters it ~~as~~ as flat though

June 16 con.

a beautiful rolling country where little valleys or swales are interrupted in places by rolling hills.

Torso. The little valleys and rolling hills along the east base of Gallatin Mts. are apparently shorter grazed than the Gallatin Valley across the mountain. Some of the southern exposures are pretty intensely grazed in winter. Soil is apparently not so good as on the western side of the mts. Some utilization of willow was noted and it is probable that some elk winter in the vicinity.

Elk, A considerable number

June 16 con.
was seen in the little basin-
like valleys and on rolling
hills along the east base
of the Gallatin Mts. A
head mostly cows but including
a few young bulls ~~was~~^{one} seen
in one bunch in an open
meadow before they saw
us or became alarmed. Five
small calves were gamboling
about near their mothers.
They run much like small
calves of domestic stock, bolting
suddenly this way and that
and wiping sudden tears
with ~~heads~~ heads meanwhile
somewhat lowered. Many
trails were seen converging
toward Fawn Pass.

June 17 (Tue) Yellowstone
Park, Wyo.

Rained here today
according to routine weather.

June 18 (Wed.), Cody, Wyo.
Left Yellowstone Park at 5³⁰_{AM}
A.M. with Mr. Rockford and
Mr. Smith and were taken
by auto by Mr. H. M. Albright
to Cody where we arrived
about 5.30 P.M. This gave
us an opportunity to see
something of the wonders of
the Park and at the same
time of game conditions.

Rockford stopped off at
Wapiti R.S. on the Shoshone,
Nat. Forest, but Smith and I
continued to Cody.

June 19 (Tues). Wapiti R.S.,
Shoshone Nat. Forest, Wyo.

Teff body about 7 A.M. ~~and~~
with Mr. Albright in his auto
and reached this place about
9 A.M. Horses were ready and
we left at once on a ride
over the range of the elk
in this forest. We joined by
the Forest Supervisor Mr.
Langworthy and Rangers
Douglas and Spencer. We
rode up Elk Fork of the
north fork of the Shoshone
River a short distance and
turned up a small branch
coming from the left and
climbed out and up along
a high ridge leading back
to the base of the higher
mountains where there was

June 19 con.

still some snow lying in places, descending by a different route, ^{round and summit} to

range. The range & the Shoshone elk is a steep country, much of it well sheltered and fairly well grassed. The soil is loose and friable, however, and the surface is less completely covered than on the Gallatin ranges. The areas along the Shoshone and Elk Fork tops are heavily utilized in winter, however, show good recovery from intensive use, the bunches of grass being strong and vigorous the lava being a part of the game pasture. There is an

June 19 em.

abundance of grass ~~at~~ on
areas utilized in summer.
The elk recently left the
lower median levels and are
said to spend most of the
summer up in near the
heads of the streams, but do
not cross the high mountain
to any great extent.

Elk. Several were seen on
a high ridge to far away
determining whether cows or
bulls. Rangers estimated 800
or 900 on Elk Fork and
vicinity. Ranger Spencer says
there is some intermixing
of elk across the head of Elk Fork
with the Thorofare country
and across the head of Eagle
creek, and Mr. Langworthy says
Yellowstone elk cross to a limited

June 19 1909 Spencer
states in summer Spencer
says that after the hunting season
that elk cross to the north
side of the Shoshone and some
some winter beyond the game
preserve borders where the
forage is fairly good. In
summer elk range far back
near the heads of canyons mainly
throughout the Shoshone
watershed, but winter mainly
in the lower part of the
Elk Fork watershed. At
Jones Pass Spencer says a few
cross. Also a few cross at
head of Tamar, some elk
believe to cross from Elk
Fork over Wapiti Ridge to
Sweet Fork & Shoshone via
Yellow Crk. Spencer says when
therefore area was closed
and area opened farther

June 1920.

most think there was a noticeable drift up Open Valley from Thorofare across the head of Elk Park. Total estimate for Shoshone elk in North 1923 is 1390. About 35 elk were found dead this spring, mostly old bulls and calves heavily infested with ticks. about 35 were killed by hunters.

Deer. About 30 carcasses of deer believed to have been killed by coyotes were found this spring. 100% of deer occupy the general area.

Spencer

Coyotes. Spencer says that coyotes have been seen in packs of a dozen together.

June 20 (Fri.) Yellowstone Park,
Yel. Nat. Park.

Left Wapiti R.S. about 10.30 a.m. and
reached Yellowstone Park (Mammoth
Camp) about 10.30 P.M.

Ranger Spencer took Smith,
Rachford and I to ~~Sylvan~~
~~Pass~~ the Park entrance east of
Sylvan Pass in his car and there
we caught one of the yellow
buses of the Yellowstone
Transportation Co. to Yellowstone
Camp, where we arrived about
6 P.M. There we were ~~not~~
met by Chief Ranger S. S. Woodring
about 9 P.M. and were taken
the remaining 31 miles to
Mammoth Camp. We had a very
pleasant trip and saw on
the way one bunch of about
100 elk near Lake Yellowstone and

June 20 con.

Several small bunches, all
in summer pelage, but no
calves were noted.

June 21 (Sat.) Tower Falls R.S.

Morning spent in preparation
for a trip northeast out of
the Park to the Absaroka
Mountains to cover conditions on
the southern slope of the
Rocky Divide.

Off at 1.30 P.M. and reached
Tower Falls R.S. about 6 P.M.
Followed the main road
across a part of the so-called
Black Tail range formerly
used as a horse pasture or
range.

Forage. The general forage
cover is fairly good, but

June 21 con't

in many places have evidently
been overgrazed at least in
the past. In many places it
shows the effect of the
dry weather that has been
general. The area apparently
received less rain and snow
than the Gallatin county,
but improves me as being
in most places better
covered with a denser
stand of grass. There is
much forage in the Gallatin
county but more of it seems
to me to be herbaceous. Many
of the aspens along the
way are scarred by elk,
partly by grazing, but much
of it by rubbing.
~~and a few seen along~~

June 24 con.
the way, but this section is
used by elk in summer to a
limited extent only.

Bears. A black bear came
walking along the hillside
within about 150 yds. of the
station about 7 o'clock. Bears
have recently been troublesome
in trying to get at food at a
road camp near the station
recently. One of the men set
a small shepherd dog on the
bear. The dog barked at the
bear but was not very anx-
ious to take hold of him and
the bear moved off delib-
erately looking back occasionally.
Yesterday a bear tried to force
his way into a cabin by
scratching at the door. Then
a man inside opened the

door the bear was ready to come on in but as he pro-
cted it fell backward off the porch when rapped on the nose with a short iron bar, and soon shuffled off growling.

Met Mr. G. E. Martin, Forest Supervisor from Lexington and Ranger Johnson who are to accompany us on our trip.

(Sun.)

June 22. Slough Cr. R.S.
Off at 8:30 A.M. Arrived here about 1:30 P.M. - 27 mi.
Route was across yellowwood River and up Slough Cr.
The valley of Slough Cr. is rather broad jerseys country varying from a

June 22 con.

few hundred yards to over half a mile. Part way up we passed the grassy bottoms where several hundred head of bison are said and fed in winter to elk. Hills are fairly steep and rocky on both sides. At one point above the bison ranches an old landslides from the left where the face of the mountain became detached reached part way across the valley.

Herbage. Grass a good stand and generally good except in the Salmon Valley where it shows effects of rather heavy grazing. This was grazed

June 22 can
by domestic stock in the
past and has apparently
never fully recovered. It
is also much grazed by
elk and probably buffaloes.
Aspens and lodgepole
pines especially younger
ones are very seriously
damaged in fact there
is little or no reproduction
along the valley near
the Kay ranches where
hay is fed in winter.
Willows also hard hit.

~~C~~ ^{a few} seen and a
few tracks of others
noted. One calf was
with a group of 4 or 5.
Antelope, ~~seen~~ seen
in one place and ~~2~~
2 in another.

Moose. Tracks along
Slough Lk. near R.S.

June 23 (Mon.) Slough Lk.
R.S.

Off at 6 A.M.; returned at
6 P.M. to same camp. - 30 mi.

Ridge today was up the
ridge between Foot Lk. and
Wolverine Lk., the west branch
of Slough Lk., entering from the
east, for several miles and then
turned down into Wolverine Lk.
Canyon and followed that
up to its head in the foot
leading across to the extreme
head of Stitewater River. We
then climbed Peace Mt.
which extends well above
timberline, then returned to
the Pass mentioned and scoring

June 23

around to the east of Pease,
Mt. along the edge of Stillwater
Valley to Lake Abundance in a
pass separating the head of
of Lake Abundance Cr. from
the Stillwater drainage.

We then descended Lake
Abundance Cr. to Slough Cr.
and returned to the station.

Much of the country is
timbered and the general
area is high but there
are some open glades
especially along streams
affording considerable grass
and weed forage. There
is little forage in the
larch - spruce and fir, but
of the considerable
forage where the larch is
lodgepole pine or Douglas
fir. Wonderful views were

June 23rd con.

had of the surrounding mountains from the ~~top~~^{head} top of Peace Mt. I do not remember ever to have had finer mountain views from one point. We were com-
pletely surrounded by horizon peaks clad in partially melted snow,
largely above timber line,
the lines of snow alternating
with bare ground bring-
them out in striking
contrast. Cut-off Mt. on
our right as we ascended
the valley of Wolverine
lk. presented a particularly
striking appearance.

Farol. The entire area covered today was sheep range, rather closely cropped

June 23 con.

I judged, but perhaps not overgrazed as there is a good stand of grass and weeds or herbaceous vegetation coming up. Very ~~few~~ little signs of game of any.

Elk. Tracks were seen of a few elk in various places one ^{in Wolverine Pass} and it is clear that a very few remain on the area. The mountain wall along the Park boundary from Slough Lk. over through Cut Off mt. to the Pass at the head of Wolverine Lk. seems to form an effective barrier for elk.

Moose. A few signs seen on both Wolverine and Lake Abundance creeks. Brows & mounds.

June 23 con.

Castor. One killed near
the head of Wolverine Cr.
was found him walking
about in a grassy glade.
His stomach contained about
a qt. of vegetable fragments
including what appeared
to be about 2 tablespoonsfuls
of the inner bark of Lodgepole
pine, various herbs and
grasses.

Moose. Moose signs seen in
swampy spots

Deer. Saw a few tracks
of late afternoon at
Lake Abenaki

Ant. Sheep. Three seen by
Rockford on Peace Rds.

(Cont.)
June 24, Buffalo Fork R.
Off at 7.30 a.m.; arrived here 12.30
P.M. - Dist. 12 mi.

Route was across Slough Cr. and
up the ridge south & west of
Bull Cr. to the top of a ridge
at about 9000 ft. at the head
of Bull Cr., then down a side
canyon to the R. on Buffalo
Fork. Ascended rather sloping
nearly all the way through
timber, but open glades appear
in places.

Forage. An abundant growth
of dwarf honeyuckle, ~~and~~
some other small shrubs
and herbaceous vegetation in
the timber up to the higher
elevations recently saved of
snow where almost nothing
has yet started to grow. It will
be at least July 15 before much

June 24 con.

forage will be available
for game or for sheep at
the higher elevations. Forage
today on the area closest to
domestic stock is much better
than yesterday on areas grazed
by sheep. He had very fine views
of the surrounding country from
the summit. Our views extended
as far as to Pilot and Dadeys
mts. across the Wyo. line east
of the Park. and to Three Rivers
mt. in the Gallatin.

Bear. A few tracks seen along
the trail up the ridge.

Moose, a number of tracks on
trail up ridge.

In afternoon made trip to
Hidden Lake about 3 miles
down the valley below the Sta.
and located in the timber on

June 24 1941

the hill side behind what is
probably an old land slide.

Elk. Numerous signs seen
along valley bottom and ~~at~~
~~elk~~ 5 seen in morning.

Moose. A good many signs
along valley below station.

Forage. Willows browsed
~~apparently to a limited extent~~,
by moose only indicates that
elk do not winter in numbers
here. Ranger Johnson says
a few bull elk winter in
the general area.

June 25(Wed.) Hellroaring
R.S.

Off at 7.30 a.m.; reached
Hellroaring R.S. about 4 P.M.

Route today was across Buffalo
Fork and up a ridge to the top
of Hummingbird Peak near the
head of Bull lek. and along a
ridge north until blocked by
snow. We turned back and took
the trail down the slope to
Hell Roaring R.S.

Forage. Good on lower slopes, but
on the higher slopes where snow
has recently melted it has not
yet started to grow.

Elk. A few signs of elk and
were seen as high as near
Telephone Basin which is common
range for a few only. And a few
signs of elk were seen on the

June 25

Hillroaring slope. It is evident that few elk range in the area. A few acres near its plateau Moose. A bull was seen by ~~fact~~ in descending the Hill Roaring side of the ridge we crossed. And tracks were seen in a number of places, including the immediate vicinity of Hill Roaring Sta.

Deer. A number of tracks were seen and it seems probable that they are not uncommon in the general area traversed.

June 26, Hell Roaring R.D.

Off at 7:30 A.M. and returned to same station at 8:30 P.M.

Rout was up ridge east of Hell Roaring to Middle Fork which was crossed above its mouth and we turned up West Fork for a short distance to a cabin on the sheep grazed area. Then across Hell Roaring and back down the ridge on the west side of the creek via Carpenter Gap. Went up W. Fork to last meadow.

Forage very good at the lower elevations on closed area, but on sheep grazed area forming driveway was evidently closely cropped.

Tell very few signs. Tracks of one noted on sheep grazed area ~~on hill~~ on West Fork

of Hell Roaring a short distance above mouth.

Mr. Linn. Tracks of one seen on West Fork of Hell Roaring bk.

Lynx. Tracks of one seen on W. Fork of Hell Roaring bk.

Cougar. One seen near Hell-Roaring R.S. and tracks of one seen on W. Fork of Hell Roaring bk.

Citellus columbianus. A few occur on sage brush flat and dry hillsides near Hell Roaring R.S.

Thomomys. Range to top of highest mts. Throw out dirt which remains as short ridges after snow is gone, then apparently remain inactive for considerable time.

Roll 20 - Montana - 1924

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BUREAU OF BIOLOGICAL SURVEY.
WASHINGTON.

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U. S. Department of Agriculture,

Washington, D. C.

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Bureau of Biological Survey.

Southern Elk Herd. (Migration)
Park Ranger Geo. Wm.
says that in the fall of
1922 he was stationed
just north of Thorofare
Ck. near the Park line
and the first snow
storm, he thinks about
Nov. 1, split the elk in
that locality - part of
them went down the
Yellowstone and part
crossed the Yellowstone
and started westward
towards Snake River. These
would perhaps naturally
have gone down Pacific
Ck. drainage if it had not
been for the hunting in the
open section. Snow from 5 ft.
and about 6 in. of snow fell.

Rising - Park Rangers - Game

Territory covered ~~about 100 miles~~
Distance travelled and conditions

Weather conditions; depth of snow.

General forage conditions.

Elk (sp. and situation)

~~Horned~~

Total number seen.

♂ Bulls, cows, calves in separate bunches.

Gen. condition; fat or lean? In summer or winter coat? Nos. of bulls with and without horns?

Condition of horns: growing? in velvet?

Stripped? Smooth?

at different times

Locality favored: timber? open parks? Grazing or browsing on ~~roads~~ ~~so~~ northern or southern slopes?

Note particular plants favored as ~~forbs~~ ^{or grasses}

Browsing open or mallow and if so to what extent?

Can form spreading,
any mixture of drift, giving
direction and exact locality.

Predatory animals seen. Any
evidence of effect on game.

Does the increasing of willow
exceed the growth of the
spreading sprau? Does the
sprawling stand over an
entire willow clump or patch,
or only ~~in~~ ^{near} a few twigs?
Are any dead animals found
infested with ticks and if so
to what extent?

Dead animals found
% of animals found dead.
Cause of death.

Predatory animals seen. Any
evidence of effect on game.

Fishbone,

840 - 900

950 - 1000 - Mar. 1918 - (Count)
and estimated 1300

300 red bills along rock in
Tad C 1919

3000 at some time.

A few den crowded mainly
to 100 ft. from fields & the fields
and about 200 within this

Foot of 2 sun up dune in
Mt. 500' in Terrell county
on Pine Forest mtn.
Perhaps Baccharis soft, which
was in country away earlier.